Pending Claims:

Listing and Status of Claims:

Claim 1. (Previously Presented): A synthetic multivalent T cell receptor (TCR) complex for binding to a MHC-peptide complex, which TCR complex comprises a plurality of T cell receptors specific for the MHC-peptide complex, wherein each TCR in the complex is a refolded recombinant TCR which comprises:

i.) a recombinant TCR α or γ chain extracellular domain having a first C-terminal dimerization peptide which is heterologous to the α or γ chain; and

ii.) a recombinant TCR β or δ chain extracellular domain having a second C-terminal dimerization peptide which is heterologous to the β or δ chain and which is specifically heterodimerized with the first heterodimerization peptide to form a heterodimerization domain,

wherein a disulfide bond present in native TCRs between the α and β or γ and δ chains adjacent to the cytoplasmic domain is absent from the recombinant TCR.

Claim 2. (Original): The TCR complex according to claim 1, wherein the T cell receptors are αβ T cell receptors having an α chain and a β chain.

Claim 3. (Original): The TCR complex according to claim 2, wherein the α chain and β chain are soluble forms of T cell receptor α and β chains.

Claim 4. (Previously Presented): The TCR complex according to claim 1, wherein the T cell receptors are in the form of multimers of two or more T cell receptors.

Claim 5. (Original): The TCR complex according to claim 4, wherein the multimer is a trimer or a tetramer.

Claim 6. (Previously Presented): The TCR complex according to claim 1, wherein the T cell receptors are associated with one another via a linker molecule.

Claim 7. (Previously Presented): The TCR complex according to claim 6, wherein the linker molecule is a multivalent attachment molecule.

Claim 8. (Previously Presented): The TCR complex according to claim 7, wherein at least one of the T cell receptor α or β chains is derived from a fusion protein comprising an amino acid sequence encoding a protein tag.

Claim 9. (Original): The TCR complex according to claim 8, wherein the T cell receptors are biotinylated.

Claim 10. (Previously Presented): The TCR complex according to claim 1, comprising a multimerized recombinant T cell receptor heterodimer having enhanced binding capability compared to a non-multimeric T cell receptor heterodimer.

Claim 11. (Previously Presented): A multivalent TCR complex comprising a multimerized recombinant T cell receptor heterodimer having enhanced binding capability compared to a non-multimeric T cell receptor heterodimer, wherein each TCR in the complex is a refolded recombinant TCR which comprises:

i) a recombinant TCR α or γ chain extracellular domain having a first C-terminal dimerization peptide which is heterologous to the α or γ chain; and

ii) a recombinant TCR β or δ chain extracellular domain having a second C-terminal dimerization peptide which is heterologous to the β or δ chain and which is specifically heterodimerized with the first dimerization peptide to form a heterodimerization domain,

wherein a disulfide bond present in native TCRs between the α and β or γ and δ chains adjacent to the cytoplasmic domain, is absent from the recombinant TCR.

Claims 12-13. (Canceled)

Claim 14. (Previously Presented): The TCR complex according to claim 11, wherein the heterodimerization domain is a coiled coil domain.

Claim 15. (Previously Presented): The TCR complex according to claim 14, wherein the dimerization peptides are c-jun and c-fos dimerization peptides.

Claim 16. (Previously Presented): The TCR complex according to claim 11, comprising a flexible linker located between the T cell receptor chains and the heterodimerization peptides.

Claim 17. (Previously Presented): The TCR complex according to claim 1, wherein the T cell receptor is expressed in an *E. coli* expression system.

Claim 18. (Previously Presented): The TCR complex according to claim 1, wherein the T cell receptor is biotinylated at the C-terminus.

Claim 19. (Previously Presented): The TCR complex according to claim 1, wherein the T cell receptors are associated with a lipid bilayer.

Claim 20. (Original): The TCR complex according to claim 19, wherein the lipid bilayer forms a vesicle.

Claim 21. (Original): The TCR complex according to claim 20, wherein the T cell receptors are attached at the exterior of the vesicle.

Claim 22. (Previously Presented): The TCR complex according to claim 20 or claim 21, wherein the T cell receptors are attached to the vesicle via derivatized lipid components of the vesicle.

Claim 23. (Previously Presented): The TCR complex according to claim 19 or claim 20, wherein the T cell receptors are embedded in the lipid bilayer.

Claim 24. (Previously Presented): The TCR complex according to claim 1, wherein the T cell receptors are attached to a solid structure.

Claim 25. (Previously Presented): The TCR complex according to claim 1, further comprising a detectable label.

Claim 26. (Previously Presented): The TCR complex according to claim 1, further comprising a therapeutic agent such as a cytotoxic agent or an immunostimulating agent.

Claim 27. (Previously Presented): The TCR complex according to claim 1, in a pharmaceutically acceptable formulation for use *in vivo*.

Claims 28-33. (Canceled)

Claim 34. (Previously Presented): The TCR complex according to claim 1, wherein the heterodimerization domain is a coiled coil domain.

Claim 35. (Previously Presented): The TCR complex according to claim 34, wherein the dimerization peptides are c-jun and c-fos dimerization peptides.

Claim 36. (Previously Presented): The TCR complex according to claim 1, comprising a flexible linker located between the T cell receptor chains and the heterodimerization peptides.